AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for producing an image display device including a thin film semiconductor device comprising growing semiconductor crystal grains in a transverse direction in a semiconductor film by modulating a continuous wave laser in time into a pulsed laser beam and irradiating it on said semiconductor film, such that melting of the semiconductor film and growth of the semiconductor crystal grains are controlled by the same pulsed laser beam.

2. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein the transverse direction is a parallel direction with respect to a main surface of a substrate on which the semiconductor film is formed.

3. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein said semiconductor film is an amorphous semiconductor film.

4. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein said semiconductor film is a polycrystalline semiconductor film.

5. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein an energy density of said pulsed laser beam is 200 mJ/cm^2 to 10 J/cm^2.

6. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein a pulse width of a pulsed laser beam is 100 ns to 1 ms.

7. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein a pulse width of a pulsed laser beam is 100 ns to 100 ms.

8. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein a pulse width of a laser beam, a time-dependent shape of laser beam intensity and an interval of laser beam pulses are modulated in modulating the continuous wave laser into the pulsed laser beam.

9. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein a raise time, a fall time, a

pulse width and a pulse interval of a laser beam are controlled by polarization with an EO modulator according to an external voltage in modulating the continuous wave laser into the pulsed laser beam.

10. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, further comprising a laser beam source of the continuous wave laser is a solid-state laser device or a laser diode device.

11. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, further comprising detecting an alignment pattern on an insulating substrate on which the semiconductor film is formed and aligning a position between the insulating substrate and the laser beam.

12. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, further comprising detecting an alignment pattern on an insulating substrate on which the semiconductor film is formed and aligning a position between the insulating substrate and the laser beam by an interferometer.

13. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, further comprising relatively moving a relationship of a position between said pulsed laser beam and an object to be irradiated.

14. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein the semiconductor crystal grains are grown in a strip shape.

15. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 1, wherein the thin film semiconductor device includes:

the semiconductor film whose semiconductor crystal grains are grown in the transverse direction,

a gate electrode formed on the semiconductor film through a gate insulating film,

first charge transmitting and receiving means and second charge transmitting and receiving means formed in the semiconductor film at a predetermined interval therebetween, and

a channel region formed in the semiconductor film between the first and second charge transmitting and receiving means.

16. (Currently Amended) A process for producing an image display device including a thin film semiconductor device comprising growing semiconductor crystal grains in a transverse direction in a semiconductor film by modulating a continuous wave laser into a pulsed laser beam and irradiating it on said semiconductor film wherein the thin film semiconductor devices includes:

the semiconductor film ~~whole~~ whose semiconductor crystal grains are grown in the transverse direction,

a gate electrode formed on the semiconductor film through a gate insulating film,

first charge transmitting and receiving means and second charge transmitting and receiving means formed in the semiconductor film at a predetermined interval therebetween, and

a channel region formed in the semiconductor film between the first and second charge transmitting and receiving means, wherein a main orientation of the semiconductor film constituting the channel region is {110} with respect to a main surface of an insulating substrate or the gate insulating film.

17. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 16, wherein a main orientation of a surface of the semiconductor film constituting the channel region substantially perpendicular to a direction for connecting the first and second charge transmitting and receiving means of the semiconductor film is {100}.

18. (Currently Amended) A process for producing an image display device including a thin film semiconductor device comprising growing semiconductor crystal grains in a transverse direction in a semiconductor film by modulating a continuous wave laser into a pulsed laser beam and irradiating it on said semiconductor film, such that melting of the semiconductor film and growth of the semiconductor crystal grains are controlled by the same pulsed laser beam, wherein the thin film semiconductor devices includes:

the semiconductor film ~~whole~~ whose semiconductor crystal grains are grown in the transverse direction,

a gate electrode formed on the semiconductor film through a gate insulating film,

first charge transmitting and receiving means and second charge transmitting and receiving means formed in the semiconductor film at a predetermined interval therebetween, and

a channel region formed in the semiconductor film between the first and second charge transmitting and receiving means, wherein the semiconductor film is essentially comprised of crystal grains having an axis in a longitudinal direction of 45° or less with respect to a direction for connecting the first and second charge transmitting and receiving means in the channel region.

19. (Currently Amended) A process for producing an image display device including a thin film semiconductor device comprising growing semiconductor crystal grains in a transverse direction in a semiconductor film by modulating a continuous wave laser into a pulsed laser beam and irradiating it on said semiconductor film wherein the thin film semiconductor devices includes:

the semiconductor film ~~whole~~ whose semiconductor crystal grains are grown in the transverse direction,

a gate electrode formed on the semiconductor film through a gate insulating film,

first charge transmitting and receiving means and second charge transmitting and receiving means formed in the semiconductor film at a predetermined interval therebetween, and

a channel region formed in the semiconductor film between the first and second charge transmitting and receiving means, ~~according to claim 15,~~ wherein the semiconductor film is comprised of a small inclination grain boundary having an angle of 75° or less with respect to a direction for connecting the first and second charge transmitting and receiving means.

20. (Original) A process for producing an image display device including a thin film semiconductor device according to claim 15, wherein the channel region of the semiconductor film is comprised of crystal grains having a length dimension in a longitudinal direction for connecting the first charge transmitting and receiving means and the second charge transmitting and receiving means.

21. (Previously Presented) A process for producing an image display device including a thin film semiconductor device according to claim 16, wherein said continuous wave laser is modulated in time into said pulsed laser beam.

22. (Previously Presented) A process for producing an image display device including a thin film semiconductor device according to claim 18, wherein said continuous wave laser is modulated in time into said pulsed laser beam.

23. (Previously Presented) A process for producing an image display device including a thin film semiconductor device according to claim 19, wherein said continuous wave laser is modulated in time into said pulsed laser beam.